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An Examination of the Similarities Between Same-Grade Friends and Different-Grade Friends

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AN EXAMINATION OF THE SIMILARITIES BETWEEN SAME-GRADE FRIENDS AND DIFFERENT-GRADE FRIENDS

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The purpose of this study was to examine the similarity between same-grade and different-grade friendship pairs compared to randomly paired children in the same grade and in different grades. Previous research has focused primarily on examining same-grade children's friendships and has not examined friendships of children differing in grade. This study examined similarities between same- and different-grade friends on teacher-rated behaviors and peer relations variables. Children in 78 ungraded primary classrooms (N = 908) participated in a sociometric interview and were rated by their teachers using the Teacher-Child Rating Scale (T-CRS, Hightower, 1986). Friendship pairs were composed of children who mutually selected one another as friends. The ungraded classrooms made it possible for children to have friends who were either one grade higher or lower. Randomly paired children were matched on age and gender and compared to the friendship pairs using teacher-rated and peer relations variables. The results indicate that common ground is an important basis for friendship, regardless of whether the friends are matched in grade level.

CHAPTER 1

Introduction

Friendship

Numerous theories of children's social development exist, and a substantial amount of research has been conducted on these theories. Of particular importance to school psychologists is the social development of school-age children. Several theorists have focused on studying the process of social development in children. Erik Erikson has proposed a theory of eight stages of psychosocial development. Erikson's stage that corresponds with school-aged children is the *Industry vs. Inferiority* stage (Siegler, Deloache, & Eisenberg, 2003). During this stage, children develop the cognitive and social skills needed to form and maintain relationships with peers. Piaget (1932/1965) and Vygotsky (1978) noted that these peer relationships help children to further develop their cognitive abilities. Piaget suggested that children view peers more equally than parents or siblings and, therefore, can more easily express their own ideas and question others' perspectives. Vygotsky emphasized that cooperation and sharing between peers is an essential part of learning and improving cognitive and social skills. It is this cooperation between peers that leads to the formation of friendships.

Sullivan (1953) described the importance of forming friendships in what he called the juvenile era, which begins when children start their formal education. He felt that friendship was how children learned to socialize with others. Sullivan indicates that children's friendships are the first instances in which children experience equality in a relationship. As previously noted, Piaget also felt that peers offer an opportunity for a more evenly balanced relationship. Sullivan believed that these equal relationships

formed in the juvenile era are the basis for intimate relationships later in life. Parker and Gottman (1989) conducted observational research on how friendship facilitates a child's socioemotional development from preschool through adolescence. Their research indicated that school-age children use friendships to understand social norms, share and understand information, and explore similarities between one another.

These theories of peer relations and friendship have created many avenues for research. In order to answer questions about peer relations and friendship, it is important to create measures that can be understood by children ranging from preschool age to adolescence. Sociometric rating and nomination procedures are the most widely used measures of peer relations and friendship, due to their validation as adequate forms of measurement among a wide age range of children (Asher & Hymel, 1981). The literature on friendship and peer acceptance has sometimes presented both constructs as one and the same. However, more recently researchers have begun to emphasize the importance of differentiating between the two constructs. Peer acceptance is defined as how much a child's peers like or accept him or her, regardless of the child's opinion of his or her peers. Friendship is defined by the mutual reciprocation of liking between two peers. It is important that both individuals forming a friendship dyad have chosen each other as a "friend" in order for the measurement to be considered valid. Hartup and Stevens (1997) indicated that reciprocity is considered a deep friendship structure and is critical in defining a friendship. Asher, Parker, and Walker (1996) argued that these constructs must be differentiated in the way they are defined in the literature and how they are measured. Acceptance can be measured using a rating method in which children rate each of their classmates on how much they like to play with them. Friendship is measured using a

nomination procedure. Children nominate those children who they like the best and those nominations that are reciprocated define a friendship dyad (Hartup & Stevens, 1997). This nomination procedure can also be used to allow peers to assess behavioral characteristics of their classmates. Some of the important and relatively easily measured behavior characteristics include shyness, aggression, and social competence. Understanding the tools used to measure friendship, acceptance, and other behavioral characteristics is critically important in understanding the social development of children.

Importance of Friendships in Childhood

The research on childhood friendships shows several developmental advantages for children who are involved in mutual friendships with peers. One of these advantages is the fact that children who have at least one friend are better adjusted than children without friends. Ladd, Kochenderfer, and Coleman (1996) indicated there are several positive correlates of friendship that affect other areas of a child's life. For example, children who reported that their friends offered them validation and aid perceived more support from classmates, leading to an improved attitude toward school. Some negative correlates of friendship were also explained by Ladd et al. (1996). They found that perceived conflict in friendships was related to school maladjustment, particularly high levels of reported loneliness and school avoidance and low levels of reported school liking. This finding was stronger for boys than for girls. Ladd (1990) conducted a study examining the effects of children's friendship on the transition into kindergarten. He found that children who had more friends at the beginning of kindergarten had more positive views of school than children who had fewer friends. If friendships were maintained throughout the school year, children reported liking school even better as the

year went on. Ladd also discovered that if children make new friends in the kindergarten classroom, these children will show an increase in school performance. Ladd found that if students were rejected by their peers and did not form friendships, they reported higher levels of school avoidance and had lower levels of school performance throughout the school year. In a recent review of the friendship literature, Gifford-Smith and Brownell (2003) found friendship was positively correlated with school adjustment and achievement. Also children with at least one friend have been found to have higher standardized achievement test scores than children without friends (Diehl, Lemerise, Caverly, Ramsay, & Roberts, 1998). This research highlights the important role friendship plays in the adjustment, achievement, and attitudes of school-age children.

Friendships can also affect the social cognitions and behaviors of school-age children. Brendgen, Bowen, Rondeau, and Vitaro (1999) conducted a study that examined the relationship between children's friends' behavior (aggressive or prosocial) and their interpretations of social situations. Brendgen et al. found that if children had friends who were aggressive, they made more aggressive responses to ambivalent situations than did children whose friends were not aggressive. This was shown to be true even after the child's own aggressive nature was accounted for. This finding was only found for preadolescents; younger children in the study did not show a higher frequency of aggressive responses when they had friends who were aggressive. This is an important finding in that it indicates that it is important to administer social skills interventions to children prior to preadolescence due to the finding that adolescents tend to act in similar aggressive ways as their friends. Brendgen et al. also found that friends' aggressiveness was not related to a change in the frequency of a child's prosocial responses. Friends'

prosociality was also not related to a change in the frequency of a child's aggressive responses. This would indicate that friends only appear to affect children's cognitions that are similar to their own. This illustrates the fact that children learn by modeling friends' behavior or through positive reinforcement of similar behavior, rather than by punishing different behavior.

Another study examined the effect of friendship on social cognitions by looking at group identification and the similarity of friends in the group (Kiesner, Cadinu, Poulin, & Bucci, 2002). The researchers found that individuals were more similar to their groups if there was a high reciprocity among the members. The opposite was also true, when reciprocity was low, similarity among the group members was low. The researchers suggested that this finding indicated individual-group similarity may be a function of reciprocation or mutual selection. This mutual selection or reciprocation was also found to be related to group identification; when individuals choose and are then chosen by members of a group, their sense of group identification increases. Group identification was also shown to be a moderator for an individual's problem and delinquent behavior. For example, when group identification was low, there was little effect on an individual's behavior. However, when group identification was high, there was a greater chance that an individual's behavior would be similar to the group's behavior. In other words, the individual would behave more similarly to the group when they had a greater sense of identification with the group.

Kiesner, Poulin, and Nicotra (2003) found that an individual in two unique groups, one inside and one outside of school, behaves differently depending on which group he/she may be in at the time. This finding suggests that peer networks inside and

outside of school may provide different behavioral cues to an individual. Thus peers appear to have an effect on a child's behavior. Kiesner et al. also found that individual children may experience depressive symptoms if they do not identify with a peer network inside or outside of school. However, if children identify with a peer network outside of school, then they are less likely to experience depressive symptoms, suggesting that a peer network or group serves as a protective factor against depressive symptoms.

Hartup and Stevens (1999) drew several conclusions about the characteristics of friends and their role in an individual's social development from their review of the related social development literature. They felt that the types of friends are important to social development, not merely just having friends. They further indicated that it is important for children to have socially competent friends in order to develop appropriate social skills. Hartup and Stevens also suggested that a child's age plays a role in whether or not friends are a supportive factor in a child's social development. The age of the child indicates how involved the friendship is and whether or not it is a mutual friendship. These factors are what predict whether or not a friendship is a supportive factor in a child's social development. This review adds support to the theory that friends can influence and affect a child's individual behavior and social development.

As previously noted, the type of friend a child has plays a large role in the child's development. There is evidence that friends, or lack thereof, can even affect a child's development of psychopathology and other significant behavior problems. Berndt, Hawkins, and Jiao (1999) found that when children have stable friendships with children who have behavior problems, their own behavior problems tend to increase, particularly during preadolescence. Rutter and Garmezy (1983) found that children who seek clinical

help for emotional or behavioral problems more commonly report having no friends than those children who are more emotionally and behaviorally stable. Bagwell and Coie (2004) examined the friendships of aggressive and non-aggressive boys. They found that non-aggressive boys and their friends showed greater positive interactions, on-task behavior, and engagement in reciprocal interactions than aggressive boys and their friends. Aggressive boys and their friends were found to engage in more rule-breaking behavior and were more easily enticed by their friends to break the rules. The researchers also found that there was greater negative affect and conflict in the interactions of aggressive boys and their friends. These findings support Hartup and Steven's (1999) view that the type of friend is more important in a child's social development than the number of friends.

In a fairly recent review of the peer and friendship literature, Deater-Deckard (2001) discussed some of the positive and negative influences friends can have on an individual's externalizing and internalizing behaviors. Deater-Deckard also discussed the roles that friendships play in helping to ameliorate the effects of peer rejection, bullying, and victimization. Several pieces of research were highlighted that stated that just by having a best friend, the chances of being bullied or victimized are reduced. Deater-Deckard also noted that there seems to be a relationship between not having best friends and experiencing externalizing problems.

Deater-Deckard (2001) indicated that there is evidence that friendships play a large role in externalizing problems experienced by children. The evidence is in research conducted by Dishion, McCord, and Poulin (1999). These researchers found that antisocial youth encouraged and taught each other delinquent acts by providing positive

reinforcement and by discussing the delinquent acts. They also found that adolescents at-risk of becoming antisocial engaged in more delinquent behavior after being exposed to other antisocial youth during treatment. Research on the relationship of increased drug use and having friends who use drugs was also discussed. The notion that friends reinforce the problem behavior is also true for drug use. Friends also appear to provide increased opportunities for the drug use to occur. Research on friendship dyads of aggressive children, where both children are considered to be aggressive, indicates that aggressive acts increase when the dyad is together. This finding is true even after each child's individual aggression is controlled for, thus indicating that these children seem to feed off each other's aggression and become more aggressive together.

Research also shows that antisocial children's friendships can remain stable and that children involved in these friendships have increased behavior problems (Berndt et al., 1999; Brendgen, Vitaro, & Bukowski, 2000). It appears that problem behavior is increased through the positive reinforcement of that problem behavior by the other member of the dyad. Deater-Deckard also discusses the effects of friendships on internalizing problems. There appears to be some evidence that friends reinforce internalizing behaviors by reducing hostility and increasing prosocial interactions in the relationship. For example, if a child acts sad, then the other member of the dyad reduces his/her hostility and increases his/her positive interactions toward the sad child. There is also some evidence that suggests an individual is more likely to attempt suicide if a friend has made a prior attempt to commit suicide. Deater-Deckard notes there is limited research on the influences of friendship on an individual's internalizing problems.

Deater-Deckard (2001) notes that caution must be used in attempting to determine the direction of causation when considering the influences of friendship on these externalizing and internalizing problems. There is not enough longitudinal and methodologically sound research on these topics to make conclusions. However, he does attempt to describe some of the mediating and moderating factors that influence children with problem behaviors and their friendships. Deater-Deckard suggests that the ability to regulate emotions, a child's attitudes and knowledge about social situations, social goals, understanding of others' perspectives, and perception of self are all mediating factors. He indicates that moderating factors could include age, gender, ethnicity, close stable friendship with a socially competent peer, and group expectations.

It is clear that friends play a critical role in children's social and emotional development. The research suggests that many individual characteristics come into play during friendship selection and maintenance. Shared characteristics also are important and can affect the behavior of both members of the dyad. These shared characteristics are an important aspect of the initial attraction and formation of a friendship.

Similarity-Attraction Hypothesis

There are several theories of how children select each other and become friends. One theory that has been studied extensively is the similarity-attraction hypothesis. This theory attempts to explain why people are attracted to one another and form friendships; it states that people are attracted to others with similar characteristics to themselves (Byrne & Griffit, 1973; Newcomb, 1961). An evolutionary explanation of the similarity-attraction hypothesis is given by Cole and Teboul (2004). They suggest that children choose friends who have similar characteristics to themselves, because if friends are

similar to us, then they must be similar to our family, and we want our family's genes to survive. Therefore, we put time and energy into friends because they resemble family. The earliest research on the similarity-attraction hypothesis began in the 1950s and mainly focused on adults. More recently, the focus of the research has shifted toward children and their friendships. As previously discussed, it is important to study friendships because close friends have a great influence on children's behavior and attitudes. Shared or similar characteristics of children and their friends are important to study because they can provide insight into why children choose the friends they do. Studying similarities between friends can also provide helpful information about the types of programs that may be most helpful for decreasing problem behaviors. Developing interventions designed to help children make friends is also important for school adjustment. Examining similarities between friends will enable understanding of how children form and maintain friendships and what role these shared characteristics play in a child's social development.

As previously stated, the bulk of the early research was on adults. Newcomb (1956) was one of the early researchers who studied male college transfer students and made predictions about the interpersonal attraction within the group based on perceived similarity. However, more recently the research has focused on children. This research shows us that children generally have friends who are similar in age, gender, race, socioeconomic status, and scholastic achievement (Clark & Drewry, 1985; Hallinan & Smith, 1985; Kupersmidt, DeRosier, & Patterson, 1995). Kupersmidt et al. (1995) found that as the amount of similar characteristics (e.g., race, gender, socioeconomic status, scholastic achievement) between children increased, the likelihood of the children

becoming friends also increased, thus indicating that similar characteristics may play a role in the formation of friendships. Other research has attempted to examine whether friends have similar behavioral characteristics, extending the research beyond demographic characteristics (Dishion, Andrews, & Crosby, 1995; Haselager, Hartup, van Lieshout, & Riksen-Walraven, 1998). There is also some research that both children and adults have friends who are similar in personality (Duck, 1973; Erwin, 1985; Rosenfeld & Jackson, 1965). An interesting finding by Erwin (1985) suggests that there may be differences in the kinds of similarity seen in the friendships of boys versus the friendships of girls. He found that boys and their friends tended to have similar attitudes, while girls and their friends have similar personality construct ratings.

Similarity of behavioral characteristics has become a hot topic among social development researchers, partially due to the fact that friends may influence each other to engage in problem behaviors. Rubin, Lynch, Coplan, Rose-Krasnor, and Booth (1994) studied the behavior of acquaintances who had never met before the study. Rubin and his colleagues observed quartets of children during play and through children's self-report were able to determine whether a member of the quartet was preferred or non-preferred. If a child did not prefer two of the three children, he or she was classified as a discriminating child. The researchers found that children preferred other children who behaved similarly to them. This finding was true even when the pair of children (discriminator and preferred) were not interacting. Rubin's and his colleagues' research suggests that similarity plays a role in the initial attraction of two children. However, their research does have some limitations. They only looked at unilateral preference; they

did not examine whether or not the preferred child also preferred the discriminating child. They also only studied acquaintances and not actual friendships.

Because friends appear to be initially attracted to one another based on similar behavioral characteristics, it is important to examine some of these shared behavioral characteristics in actual, reciprocated friendship dyads. Poulin, Cillessen, Hubbard, Coie, Dodge, and Schwartz (1997) directly observed children interacting with their friends and classmates. The goal was to examine aggressive, shy, and prosocial behavioral similarity between friends. They found that friends behaved more similarly than non-friends regarding proactive aggression, shyness, and rough-and-tumble play. Friends were not found to be similar with respect to reactive aggression. Poulin and colleagues did not find a similarity effect for prosocial behaviors. Dishion et al.(1997) also examined aggressive, shy, and prosocial behavioral similarity among boys and their friends. In this study adolescent boys were given several questions and situations in order to facilitate interaction between the dyad and were then observed during this interaction. Arrest records were also retrieved for each of the children in the study. The researchers found that 72% of the dyads had similar arrest records. After examining the observational data the researchers suggested that these boys did not have deficits in positive behavior during interactions, but the observers indicated that there was an overall social skill deficit among all of the antisocial boys.

Haselager et al. (1998) examined similarities between friends with respect to prosocial, antisocial, depressive, and shy behaviors. They also examined similarities in victimization and social status between friends. They found that, in general, friends were more similar across all measures than non-friends. Haselager et al. found that friends

may not be as beneficial to a child's social development as some studies have previously described. This finding is similar to Hartup's and Stevens' (1999) comment that simply having friends does not serve as a protective factor, but having socially competent friends is an important protective factor. Hartup and Stevens argue that friends who display more prosocial behaviors serve as protective factors and encourage the other child to engage in prosocial behavior as well. However, friends who act more antisocially and aggressively may encourage the other child to do so as well. This friendship would be maladaptive for a child's social development. Haselager et al. commented on how the advantages and disadvantages impact the children who are in a friendship where both children are shy, depressed, or victimized. They asserted that the children may help each other by alleviating loneliness or may feed off each other's symptoms and become worse.

The measurement and analysis of data are important when considering similarity between friends. Several studies have used direct observation of children and their friends (Dishion et al., 1995; Poulin et al., 1997), while others have used peer and teacher ratings (Kupersmidt et al., 1995) to measure behavioral similarity. Many of the studies conducted thus far have used correlation coefficients to determine how similar friends are to one another (Dishion et al., 1995; Rubin et al., 1994). One study has used absolute difference scores and correlation coefficients to examine similarities between children in friendship (Haselager et al., 1998). Difference scores allow children's absolute scores on measures to be compared, telling us how close their scores were to being the same score. This method provides an alternative to only analyzing shared variance between the two children on varied constructs.

There is a plethora of research on how children's friendships impact their social development. Numerous studies have shown that having friends is a protective factor for later behavior problems (e.g., Deater-Deckard, 2001). Studies have also shown how friends' behavior can affect children's behavior (Coie, 2004). However, there are issues with determining specific conclusions about who is affecting whom. Is the child choosing friends based on similar behavior to his/her own or is the child engaging in the behavior because his/her friends are? These questions are still to be determined by research.

There is also limited research on certain developmental characteristics that may play a role in the friendship formation process. For example, friendships of children who differ in age have not been examined. There have been several studies examining a range of different age children involved in friendships, for example, 4th to 8th graders (Haselager et al., 1998). The research examining peer relations in mixed-age classrooms is limited. A study conducted by Lemerise (1997) examined peer acceptance in mixed-age classrooms. Lemerise found that younger children tend to be less well-liked by their peers than older children. Another study examined the number of reciprocated friendships of younger and older children in mixed-age classes (Caverly, Lemerise, & Harper, 2002). Caverly et al. found that younger children have fewer reciprocated friendships than older children. These findings could suggest that age is the similarity factor that is at work for attracting friends in these mixed-age classrooms. However, the findings could also be explained by using developmental characteristics.

Examining same-age and different-age friendships is important because children have friends of all ages. In neighborhoods, children play with other children of different ages all the time (Ellis, Rogoff, & Cromer, 1981). However, the research has failed to

examine these kinds of friendships because much of the research is conducted in the school setting, where typically children are in same-age classrooms and have same-age friends. Researchers are leaving out an important area of friendship to study, examining different-age friendships. However, the mixed-age classrooms provide an opportunity to examine how often children choose friends of a different-age as well as the characteristics of both same-age and different-age friendships. Prior research in this area has examined only the prevalence of different-age and same-age friendships, not the similarity of characteristics between same-age and different-age friendships.

Hypotheses

Research has shown that friends are an important element in the social development of children. Although research continues on children's friendship similarity, there has not been a focus on some developmental characteristics that may play a role in this process. For example, children who are in the same class but are different in age by one year have rarely been examined. It poses some interesting developmental questions. First, do friendships exist between children of differing ages and, if so, how prevalent are they in a school setting? Secondly, will children who differ in age still show the same amount of similarity in their friendships? The current study attempts to answer these proposed questions by examining friendships of children who are the same age and children who differ in age by one year. Hypothesis 1. Reciprocal friendships do exist between children differing in age, but that these friendships may not be as prevalent as friendships between children of the same age. Hypothesis 2. Children who are friends and are the same age will be more similar according to teacher ratings and peer relations variables than friends who differ in age by one year. Hypothesis 3.Children who are

friends will be more similar than children who are randomly paired. This hypothesis is consistent with many prior studies that have found greater similarity among reciprocated friends than non-friends (Dishion, et al., 1995; Erwin, 1985; Hallinan & Smith, 1985; Haselager et al., 1998; Kupersmidt, et al.,1995; Poulin et al., 1997).

CHAPTER 2

Method

Participants

Archival data were used as the database for this study. The procedures described below were used to collect this data. A copy of the Human Subjects Review Board approval is included in Appendix A. A large number of children (N = 1063) were drawn from 78 ungraded primary classrooms in 5 public elementary schools. The ungraded primary classes were composed of two-grade combinations: first (n = 372, 35%) and second, second (n = 277, 26%) and third, third (n = 298, 28%) and fourth (n = 116, 10.9%). Racial composition of the sample was 71% Caucasian, 21% African American, and 8% other races. There were 546 boys included in the sample, which is approximately 51%. About half of the sample, 48%, included students who received free or reduced fee lunch.

Of the 1063 children included in the database, there were a total of 454 friendship pairs identified and 454 random pairs were created (see below for details). This included 281 same-grade reciprocated friend dyads and 281 same-grade random pairs that were identified. For the same-grade friend pair and same-grade random pair groups, 52% of the sample was female. Also from this larger sample, 173 different-grade reciprocated friend dyads and 173 different-grade random pairs were identified. For the different-grade groups, 47% of the sample was female. Some of the children had two or more friends and were used more than once as a part of a pair, once with each of their friends.

Measures and Procedures

Sociometric Interview

The rating and nomination sociometric interview served to measure how well peers are accepted, identify reciprocated friendships, and assess behavioral characteristics, specifically aggression, shyness, and getting along well with others. The interview was conducted after the children had been in school for at least eight weeks. This was to allow time for the children to get to know the other children in their classrooms and to make friends. Children who were in first grade were interviewed individually by an experimenter trained in the sociometric procedure. All other children participated in a group administered version of the measure. The groups contained approximately 20 to 25 students. During the group session, one experimenter led the class, and at least three other experimenters circulated through the group in order to ensure proper administration of the procedure.

The children were told they would be asked questions about each of their classmates. The children were encouraged to answer honestly and were assured that their answers would be kept confidential by the experimenters. The children were also asked to keep their responses confidential, so that their classmates' feelings would not be hurt. Next, the children were trained on the use of a five-point rating scale. The scale was a series of bars that increased in height. Each bar had a corresponding face over it ranging from sad to neutral to happy. The experimenters explained to the children that each bar depicted how much they liked someone or something, with the smallest bar (1) representing "the least" and the largest bar (5) representing "the most." Every bar was explained to the children. The experimenter then checked for understanding of the scale

by having the child indicate which foods he/she liked best and least on the rating scale. Each child's verbal and written assent was gained at this point. The children were told that there were no right or wrong answers, that they could ask questions at anytime, and that they could stop the interview at anytime. A child's written assent was obtained for children eight years and older, while verbal assent was obtained for younger children.

During the first part of the interview, the children were asked to rate, using the scale, how well they liked the other children in their class. For the individual interview, the names of the child's classmates were printed on 1" x 4" cards. The children randomly selected one card at a time, identified the name on the card, and rated how well they liked that particular classmate. The experimenter then recorded the child's response. During the group procedure, children were provided with a list of all of their classmates with the numbers one through five directly to the right of each name. Children were told that the numbers matched the ones on the scale and were asked to rate each of their classmates. The children were monitored to ensure that they worked independently and did not attempt to share their responses.

The next part of the interview required the children to nominate up to three classmates for each question. The children nominated the classmates who they "liked best," who "fights, says or does mean things, pushes or shoves others," who are "shy," and who "gets along well with others." During the individual interview, the name cards were presented so that the child could see all of them clearly. The child was asked to point to or name children for each question, while the experimenter recorded the responses. During the group procedure, children were provided a separate sheet to record

the identification numbers of the classmates they nominated for each question. The identification numbers were used in order to ensure confidentiality.

During the last portion of the interview, the children were asked what they would like to be when they grow up. This was used to distract the children's attention away from the sociometric interview process.

Teacher-Child Rating Scale

Teachers were asked to complete the Teacher-Child Rating Scale (T-CRS; Hightower, 1986) for each participating child in their classes. The T-CRS is composed of two scales, the problem behavior scale and the social competence scale. The problem behavior scale had three sub-scales: (a) acting out, (b) shy-anxious, and (c) learning problems. Teachers rated the behaviors on a five-point Likert scale where one is "not a problem" and five is "a very serious problem." The social competence scale was composed of four subscales, (a) frustration tolerance, (b) assertive social skills, (c) task orientation, and (d) peer sociability. Teachers reported how well the items described the child using a five-point Likert scale where one was "not at all" and five was "very well."

Derivation of Variables

Sociometric Variables

Peer acceptance. Children's peer acceptance was derived by averaging all of the rating scores from the participants within the class and then standardizing the scores by converting them to *z*-scores. Every class had a mean of zero and a standard deviation of one. Three peer acceptance categories were defined; a score below -1 indicated low acceptance, a score above +1 indicated high acceptance, and a score between and

including -1 and +1 indicated average acceptance. Each child fell into one of the three categories.

Social Status. Children's social status was examined using the variables of social impact and social preference. The procedure for the derivation of these variables followed the one described in Lemerise (1997). The number of "liked most of all" and "liked least of all" nominations were added and then standardized for each child. The resulting *z*-scores were used to ascertain the child's social standing within the class. Social impact was calculated by adding the "liked most of all" and "liked least of all" nominations. Social preference was calculated by subtracting "liked least of all" nominations from "liked most of all" nominations. Social impact is defined as how much an individual child is noticed by the class or peer group. Social preference is defined as how well the peer group likes a particular child.

Behavior nomination scores. The categories of "fights, says or does mean things, pushes and shoves others," "shy," and "gets along well with others" were used to measure a child's level of aggression, shyness, and getting along with others. These nominations were tallied and standardized within the class, allowing each child to receive a score for each nomination category.

Reciprocated friendships. The "like best" nomination category was used to determine reciprocated friendships. Children who mutually nominated one another as a person whom they "like best" were defined as a reciprocated friendship pair (Parker & Seal, 1994). Children could have up to three reciprocated friendships. Only same-gender reciprocated friendship pairs were chosen to be included in the analyses because there was insufficient number of mixed gender friendships to compare. The dyadic

reciprocated friendship was chosen as the unit for analysis and one child was designated as the subject and the other as the friend. These assignments were randomly selected. These friendship pairs were also categorized into two groups, same-grade friendship pairs and different grade-friendship pairs. In the same-grade friendship group both children were in the same grade. In the different-grade group, the children differed in grade level by one year.

Creation of random pairs of children. The purpose of creating random pairs was to test whether or not random pairs share similarities. These pairs differed from reciprocated friendship pairs in that neither child nominated the other as a person whom they "like best" during the sociometric interview. In order to ensure that neither child nominated the other, children within the pair were selected from different classrooms, either in the same grade or in a grade one year apart. This allowed for the creation of two groups of randomly paired children, one to correspond to the same-grade friendship group and the different-grade friendship group. The number of random pairs of same-grade children equaled the number of same-grade friendship pairs. The number of different-grade random pairs also equaled the number of different-grade friendship pairs. Because the reciprocated friendship pairs were all same-gender, the random pairs were also same-gender. The groups were also matched on the frequency of boy-boy and girl-girl pairs.

The identification numbers of all of the children participating in the study were placed into boxes separated by gender and grade. Numbers were drawn at random to create the random pairs. The only restriction was that the pair of children could not be

from the same class. As in the reciprocated friendship pairs, one child was randomly selected as the subject and the other was designated as the other.

Teacher-Rated Variables

Each subscale of the Teacher-Child Rating Scale was defined as a variable. The subscales of the T-CRS are composed of five to six questions. The individual scores for the questions comprising each subscale were added together to form a total score for each subscale. This was done for every child who participated so that each child had an acting out, shy-anxious, learning problems, frustration tolerance, assertive social skills, task orientation, and peer social skills score. Raw scores for each subscale were used. This resulted in seven teacher-rated variables for each child.

Chapter 3

Results

Correlational Analyses

Correlations were used to compare similarities in teacher-rated and peer relations variables between reciprocated friend pairs and random pairs of children. Correlations were first compared to zero in order to determine the significance of each correlation. Given positive correlations, the higher the correlation, the more similar the two children are to one another. To test the hypothesis that reciprocated friend pairs are more similar than random pairs, *z*-tests were conducted to determine whether the reciprocated friend pairs' correlations were significantly different from the random pairs' correlations. *Z*-tests were also conducted to compare the same-grade and different-grade friendship pairs to test the hypothesis that same-grade friends are more similar than different-grade friends.

The dependent measures included the peer relations variables of social impact, social preference, acceptance, aggression, shyness, and "gets along with everybody" as well as the teacher-rated variables of acting out, shy-anxious, learning problems, frustration tolerance, assertive social skills, task orientation, and peer social skills. Due to the large number of *z*-tests that were conducted, a Bonferroni correction was performed to adjust the alpha level, thereby lowering the chance of making a type one error. The alpha level was adjusted to $p < .003$. Means and standard deviations of peer relations and teacher-rated variables for friend pairs are presented in Table 1 and for random pairs in Table 2. Correlational analyses were run for same-grade friend pairs, different-grade

Table 1

Means and Standard Deviations for Friend Pairs on Peer- and Teacher-rated Variables

	Same-Grade Pairs (n = 281)				Different-Grade Pairs (n = 173)			
	Child		Friend		Child		Friend	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Peer-rated Variables								
1. Social Impact	0.30	1.03	0.33	0.94	0.39	0.95	0.23	0.96
2. Social Preference	0.89	1.44	0.76	1.50	0.92	1.43	0.96	1.47
3. Aggression	-0.10	0.90	-0.08	0.92	-0.03	0.95	-0.18	0.87
4. Gets Along	0.29	1.14	0.17	0.95	0.25	1.01	0.17	0.95
5. Shyness	0.04	1.16	-0.11	0.92	-0.06	0.96	-0.15	0.95
6. Acceptance	0.31	0.84	0.35	0.90	0.38	0.90	0.44	0.81

Table 1: *Continued*

	Same-Grade Pairs (n = 281)		Different-Grade Pairs (n = 173)					
	Child		Friend		Child		Friend	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Teacher-rated Variables								
Problem Behaviors								
1. Acting Out	9.78	5.44	10.11	5.78	9.84	5.53	9.40	4.91
2. Learning Problems	10.53	6.26	11.13	6.26	10.90	6.17	10.57	5.79
3. Shy/Anxious	7.35	2.89	7.42	3.21	7.35	2.81	7.36	2.79
Competence Behaviors								
4. Assertiveness	16.83	5.34	17.16	4.96	16.78	5.38	17.05	5.17
5. Frustration Tolerance	16.62	5.25	16.55	5.05	16.99	5.27	16.84	4.81
6. Peer Sociability	19.35	4.99	19.83	4.90	19.66	5.36	19.87	4.96
7. Task Orientation	17.29	5.67	17.27	5.76	17.37	6.03	17.42	5.62

Table 2

Means and Standard Deviations for Random Pairs on Peer- and Teacher-rated Variables

	Same-Grade Pairs (n = 281)				Different-Grade Pairs (n = 173)			
	Child		Friend		Child		Friend	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Peer-rated Variables								
1. Social Impact	-0.30	0.98	0.03	1.03	-0.11	1.07	0.11	1.06
2. Social Preference	0.14	1.66	0.08	1.75	0.06	1.64	0.14	1.60
3. Aggression	0.00	1.01	-0.01	1.01	0.05	1.06	0.01	0.98
4. Gets Along	-0.03	0.88	0.07	1.07	-0.01	1.11	0.04	0.97
5. Shyness	-0.02	1.00	0.02	1.01	-0.07	0.93	-0.05	0.95
6. Acceptance	0.05	0.97	0.00	1.02	0.07	1.03	0.02	0.97

Table 2: *Continued*

	Same-Grade Pairs (n = 281)				Different-Grade Pairs (n = 173)			
	Child		Friend		Child		Friend	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Teacher-rated Variables								
Problem Behaviors								
1. Acting Out	10.88	6.51	11.36	6.60	10.84	6.45	10.54	6.05
2. Learning Problems	12.09	6.87	12.74	7.37	12.50	6.93	11.74	6.63
3. Shy/Anxious	7.59	3.22	7.54	3.14	7.47	3.01	7.46	2.96
Competence Behaviors								
4. Assertiveness	16.49	5.31	16.28	5.39	15.97	5.24	16.13	5.38
5. Frustration Tolerance	15.45	5.25	16.33	5.30	15.56	5.23	16.13	5.09
6. Peer Sociability	18.37	5.41	18.16	5.61	18.17	5.42	18.35	5.37
7. Task Orientation	16.24	5.89	15.86	6.20	15.78	6.10	16.10	6.02

friend pairs, same-grade random pairs, and different-grade random pairs for both peer relations variables and teacher-rated variables. Correlations are presented in Table 3.

Comparisons of Peer Relations Variables

The peer relations variables analyzed for similarities were social impact, social preference, peer acceptance, aggression, shyness, and "gets along with everybody." The friend group correlations were significantly different from zero for all of the peer relations variables, r's $\geq .235$, p's $< .01$, except for the social impact and "gets along with everybody" variables. Only the same-grade friendship group had a significant correlation on the social impact variable, $r = .158$, $p < .01$. None of the correlations were significant for the "gets along with everybody." Comparisons across all four groups (same-grade friends, same-grade random pairs, different-grade friends and different-grade random pairs) using z-tests showed that both friend groups had significantly higher correlation coefficients than both random pair groups on aggression, $z = 2.865$ (same-grade) and $z = 2.876$ (different-grade), p's $< .003$, and shyness, $z = 3.643$ (same-grade) and $z = 2.895$ (different-grade) p's $< .003$. None of the comparisons for the other variables were significant. The correlations were also compared between the two friend groups and between the two randomly paired groups to see whether they were significantly different from each other. However, none of these correlations were significantly different from one another.

Comparisons of Teacher-rated Variables

The teacher-rated variables analyzed for similarities included children's acting out behaviors, shy-anxious behaviors, learning problems, assertiveness, frustration tolerance, peer sociability, and task orientation. Correlations were significantly different from zero

Table 3

Friend Pair and Random Pair Correlations on Peer- and Teacher-Rated Variables

	Friend Pairs		Non-Friend Random Pairs	
	Same Grade	Different Grade	Same Grade	Different Grade
Measure	(n = 281)	(n = 173)	(n = 281)	(n = 173)
Peer-rated Variables				
Social Impact	$.158_a$**	$.083_a$	$.023_a$	$-.157_a$
Social Preference	$.235_a$**	$.299_a$**	$.077_a$	$.041_a$
Aggression	$.331_a$**	$.262_a$**	$.099_b$	$.064_b$
Gets Along	$.080_a$	$.014_a$	$.079_a$	$-.078_a$
Shyness	$.342_a$**	$.294_a$**	$.047_b$	$-.010_b$
Acceptance	$.250_a$**	$.352_a$**	$.072_a$	$.100_a$

Table 3: *Continued*

	Friend Pairs		Non-Friend Random Pairs	
	Same Grade	Different Grade	Same Grade	Different Grade
Measure	(n = 281)	(n = 173)	(n = 281)	(n = 173)
Teacher-rated Variables				
Problem Behaviors:				
Acting Out	$.429_a$**	$.267_a$**	$-.067_b$	$.091_{ab}$
Learning Problems	$.398_a$**	$.183_a$**	$-.027_b$	$.009_{ab}$
Shy/Anxious	$.289_a$**	$.228_a$**	$.026_b$	$.027_{ab}$
Competence Behaviors:				
Assertiveness	$.409_a$**	$.360_a$**	$-.009_b$	$-.037_b$
Frustration Tolerance	$.470_a$**	$.365_a$**	$-.043_b$	$.047_b$
Peer Sociability	$.498_a$**	$.426_b$**	$-.093_c$	$.070_c$
Task Orientation	$.344_a$**	$.260_a$**	$-.010_b$	$.024_b$

Note: Within a row, correlations that are significantly different (z-test) by at least $p < .003$, are indicated by different subscripts.

* $p < .05$, ** $p < .01$, *** $p < .001$ for significance of correlations.

for both friend groups on all of the teacher-rated variables, r's $\geq .183$, p's $< .01$. Comparisons (z-tests) of the correlations of the four groups (same-grade friends, same-grade random pairs, different-grade friends, and different-grade random pairs) showed that the same-grade friend group had significantly higher correlations than the same-grade random paired group for all of the teacher-rated variables, z's ≥ 3.23, p's $< .003$. The different-grade friend group had significantly higher correlations than the different-grade random pair group on all of the teacher-rated competence variables (assertiveness, frustration tolerance, peer sociability, and task orientation), z's ≥ 3.12, p's $< .003$. However, these two groups did not differ significantly on any of the teacher-rated problem behaviors. The two friend groups and the two random pair groups were also compared using z-tests. The same-grade friend group had significantly higher correlations than the different-grade friend group for teacher-rated peer sociability, $z = 2.91$, $p < .003$. There were no other significant comparisons between the friend groups. There were no significant comparisons between the same-grade and different-grade random pair groups.

Difference Score Analyses

Difference scores were used because shared variance alone fails to indicate whether or not individuals receive the same absolute score on a measure of similarity. Difference scores were calculated by subtracting the friend's/random pair's score from the target student's score for each peer relations and teacher-rated variable (Haselager et al., 1998). The absolute value of the resulting difference score was used. Smaller difference scores indicate that the pair is highly similar, and large difference scores indicate less similarity between the pair. Two four (pair condition: same-grade friends, different-grade friends, same-grade random pairs, different-grade random pairs) X two

(gender) X four (grade: 1, 2, 3, 4) multivariate analyses of variance were conducted, one examining peer relations variables and the other examining teacher-rated variables. The multivariate analyses of variance revealed a significant effect (Wilk's lambda) of pair condition for both peer relations variables, F (18, 2464) = 4.26, $p < .001$, and teacher-rated variables, F (21, 2499) = 5.40, $p < .001$. The significant multivariate effects of pair condition were followed up by one-way analyses of variance and Tukey's HSD tests to determine which specific variables were significant. Means and univariate F values are reported in Table 4 and below. In addition, there were significant multivariate effects (Wilk's Lambda) of grade, F (21, 2499) = 1.636, $p < .035$, for the teacher-rated variables and, F (18, 2464) = 1.761, $p < .025$, for the peer relations variables. Significant multivariate effects of gender were also found, F (7, 870) = 7.095, $p < .001$, for teacher-rated variables and, F (6, 871) = 31.517, $p < .001$, for peer relations variables. Since, there were no significant interactions with pair condition for either peer relations or teacher-rated variables, the results will focus on the effects of pair condition. The comparisons of the same-grade and different-grade friendship and random pair groups are presented below and in Table 4.

Difference Score Comparisons for Peer Relations Variables

Significant univariate effects of pair condition were found for social impact, social preference, aggression, shyness, and peer acceptance difference scores, F's (3, 876) $\geq$ 3.43, p's < .03 (see Table 4 for each F and p value). No significant effects of pair condition were found for the "gets along with everybody" nomination difference score. Results of the Tukey's HSD tests revealed that both friend groups had significantly lower social preference, aggression, and acceptance difference scores than both random pair

Table 4

Mean Difference Scores for Friend and Random Pairs on Peer and Teacher Rated Variables

	Friend Pair		Random Pairs		
	Same Grade	Different Grade	Same Grade	Different Grade	
Measure	(n = 281)	(n = 173)	(n = 281)	(n =173)	F
Peer-rated Variables					
Social Impact	$.992_{a}$	1.055_{a}	1.149_{ab}	1.337_{b}	6.40***
Social Preference	1.391_{a}	1.399_{a}	1.823_{b}	1.795_{b}	9.31***
Aggression	$.697_{a}$	$.734_{a}$	$.984_{b}$	$.949_{b}$	6.44***
Gets Along	$.896_{a}$	$.962_{a}$	$.916_{a}$	1.012_{a}	.96
Shyness	$.847_{ab}$	$.786_{a}$	$.995_{ab}$	1.031_{b}	12.89***
Acceptance	$.809_{a}$	$.762_{a}$	1.094_{b}	1.048_{b}	3.43*

Table 4: *Continued*

	Friend Pair		Random Pairs		
	Same Grade	Different Grade	Same Grade	Different Grade	
Measure	(n = 281)	(n = 173)	(n = 281)	(n =173)	F
Teacher-rated Variables					
Problem Behaviors:					
Acting Out	3.858_{a}	3.994_{a}	6.954_{b}	6.064_{b}	15.97***
Learning Problems	4.751_{a}	5.462_{a}	7.872_{b}	7.162_{b}	12.20***
Shy/Anxious	2.491_{ab}	2.405_{a}	3.178_{b}	3.098_{ab}	3.71*
Competence Behaviors:					
Assertiveness	4.363_{a}	4.624_{a}	6.167_{b}	6.214_{b}	13.79***
Frustration Tolerance	3.915_{a}	4.324_{a}	6.157_{b}	5.763_{b}	16.27***

Table 4: *Continued*

	Friend Pair		Random Pairs		
	Same Grade	Different Grade	Same Grade	Different Grade	
Measure	(n = 281)	(n = 173)	(n = 281)	(n =173)	F
Teacher-rated Variables					
Competence Behaviors:					
Peer Sociability	3.491_{a}	4.041_{a}	6.623_{b}	5.977_{b}	28.51***
Task Orientation	4.964_{a}	5.717_{ac}	7.057_{b}	6.775_{bc}	9.20***

Note: Within a row, significant differences are indicated by different subscripts.

* $p < .05$, ** $p < .01$, *** $p < .001$.

groups. Both of the friend groups had significantly lower social impact difference scores than only the different-grade random pair group. For the shyness rating, the different-grade friend group had significantly lower difference scores than the different-grade random pair group, while the same-grade pair groups did not differ significantly.

Difference Score Comparisons for Teacher-rated Variables

Significant univariate effects of pair condition were found for teacher-rated variables, F's $(3, 876) \geq 3.710$, p's $< .05$ (See Table 4 for each F and p value). Results of Tukey's HSD post hoc tests revealed that both friend groups had significantly lower "acting out," "learning problems," assertiveness, frustration tolerance, and peer sociability difference scores than both random pair groups. Same-grade friends and different-grade friends were not different from each other in their "acting out," "learning problems," assertiveness, frustration tolerance, and peer sociability difference scores. The same was true for same-grade random pairs and different-grade random pairs. Both friend groups had significantly lower task orientation difference scores than only the same-grade random pair group. There were no meaningful differences between the pair condition groups on the shy-anxious difference score.

Chapter 4

Discussion

The purpose of the current study was to examine similarities between children and their friends in a sample of children in mixed-age classrooms. Friendships between children who were the same age (grade level) and between children of different ages (grade levels) were examined. Previous research has focused heavily on demographic variables when comparing similarity between friends. There has been some recent focus on friends' similarity in social and behavioral variables, but few studies have examined these variables in children and their friends who differ in age. This is an important area of friendship to study because children do not have only same-age friends. In reality children have friends differing in age, some older, some younger than themselves (Ellis, et al., 1981). Similarity in friendship is important to examine because past research has shown that children tend to behave similarly to their friends (Bagwell & Coie, 2004; Berndt, et al., 1999; Brendgen, et al., 1999). However, few studies have examined similarity in friends differing in age. The primary focus of the current study was to compare social and behavioral similarities of friends differing in grade by one year compared to friends who are from the same grade.

Prevalence of Same-grade and Different-grade Friends

The first hypothesis was that friendships between children differing in grade do occur in ungraded primary classrooms. This was examined by looking at reciprocated friendships to determine if any of the 454 reciprocated friendships pairs had children of different grades. There were a total of 281 same-grade friendships and 173 different-grade friendships identified. This indicates that children will form friendships with other

children who are either a year older or younger. The second hypothesis was that friendships between children of different grades will be less prevalent than friendships of children of the same age. This was found to be true due to the fact that approximately 62% of the total friendships were of children of the same grade, while approximately 38% of the friendships were of children differing in grade.

Peer Relations Variables

It was hypothesized that children who are friends are seen as more similar by their peers than are children who are randomly paired. Correlational analyses showed that this hypothesis was generally supported. Of the six peer relations variables, results indicated that the reciprocated friend pair groups were rated significantly more similar on two of the peer relations variables, aggression and shyness. This indicates that, in general, peers see friends sharing more characteristics of aggression and shyness than randomly paired children. This indicates that children will have friends who will be similar in aggression level to themselves. The same could be said to be true for a child's degree of shyness.

The hypothesis that children who are friends are more similar than children who are randomly paired, was also examined using difference scores and a multivariate analysis of variance. Results indicated that reciprocated friend groups were significantly more similar on three (social preference, aggression, and peer acceptance) of the six variables examined. For the social impact variable, both friend groups were only significantly more similar than the different-grade random pair group. For the shyness variable, only the different-grade friend group was significantly more similar than the different-grade random pair group. There was no difference between the friend groups and the same-grade random pair group for the shyness variable. As was seen in the results

of the correlational analyses, none of the groups differed in similarity on the "gets along with everybody" nomination. The results of both the correlational analyses and the univariate analyses of variance using difference scores indicate that friends are indeed more similar on the majority of peer relations variables than are random pairs.

Neither the correlational analyses nor the difference score analyses indicated that same-grade friend pairs were more similar than different-grade friend pairs for any of the peer relations variables. This pattern of findings did not support the hypothesis that same-grade friends will be more similar than different-grade friends.

The results of the difference score analyses of variance showed that only the different-grade friends were significantly more similar than the different-grade random pairs for the shyness variable. Same-grade friends were not significantly different from same-grade random pairs on this variable. This is an interesting finding and could indicate that a child who is shy seeks out other children who are shy even if that child is in a different grade. These children may be unable to befriend children in their same grade, due to shyness, and feel more comfortable with a child of a different age. The previously reported finding about shyness could go hand-in-hand with the finding about friends' similarity on the social impact variable. Both same-grade and different-grade friends were found to be more similar than only the different-grade random pair group on the social impact variable. These two variables could be describing a similar sampling of children. Social impact is defined as how much an individual is noticed by their peer group. If a child is particularly shy, then one could assume he will have a low social impact score because shy individuals are less likely to be noticed. Therefore, children who have low social impact scores will be more likely to gravitate towards other children

who have low social impact scores because these children may be shy and may feel more comfortable with a "lower profile" friend.

Teacher-rated Variables

Similar analyses to those done with the peer relations variables were conducted to test the hypothesis that children who are friends are perceived as being more similar by their teachers than children who are randomly paired. The correlational analyses showed that reciprocated friends were significantly more similar than randomly paired children on all four of the teacher-rated competence behaviors. However, only the same-grade friend group was significantly more similar than the same-grade random pair group on teacher-rated problem behaviors. This indicates that teachers view children who are friends as sharing similar competence characteristics. Teachers also appear to view same-grade friends as sharing more similar problematic characteristics. This only partially supports the hypothesis that friends are more similar than non-friends because different-grade friends were not significantly more similar than different-grade random pairs for the teacher-rated problem behaviors.

According to the univariate analyses and post hoc tests of difference scores, the teachers rated friends more similarly than random pairs on five ("acting out," "learning problems," assertiveness, frustration tolerance, and peer sociability) of the seven variables. In addition, b oth friend groups were more similarly rated by teachers on task orientation than same-grade random pairs. This indicates that friends generally share more similar teacher-rated task orientation scores than randomly paired children. There were no meaningful differences between the pair condition groups for teacher-rated shy-anxious difference scores. This could indicate that there was just not enough variance in

the teachers' responses to obtain an accurate picture of similarity between friends. This is shown in Table 1 by the lower standard deviations on the teacher-rated shy/anxious variable. These analyses indicate that generally teachers rate children who are friends more similarly than randomly paired children, thus supporting the hypothesis that children who are friends are more similar than randomly paired children.

According to the correlational analyses, the same-grade friend group was significantly more similar than the different-grade friend group on teacher-rated peer sociability. This would lend some support to the hypothesis that friends in the same grade will be more similarly rated than friends in different grades. However, according to the difference score analyses, the friendship groups did not differ on any of the teacher-rated variables. Therefore, according to the data presented here, there is only weak support from the teacher ratings for the hypothesis that same-grade friends are more similar than different-grade friends. It seems that friends differing in age generally are equivalent in similarity to friends of the same-age. This is an intriguing finding. Past research on friends has focused on demographic variables of similarity (e.g., age, gender, race, SES). This study shows that even friendship pairs composed of children of different grades are as similar as friendship pairs composed of children of the same grade. This indicates that the difference in grade between friends does not lead to a difference in the amount of shared characteristics the friends have. In other words, children pick friends based on shared characteristics, not grade level.

Limitations

The way in which the different-grade and same-grade pair groups were formed is a limitation of the study. Because the different-grade pairs were composed of children in

different grades, it was assumed that these children would differ in age by one year. However, this may or may not be the case for every pair of children. Schools use cut-off dates for children's birthdays when deciding whether a child should enter into kindergarten or not. Thus, two children one grade apart could only differ in age by one day. Also, children can be held back a grade; therefore, making the age of a particular child one year older than the other children in his/her grade. This was not examined in the current study. The way to solve this problem is to determine children's ages and compare them. It would be intriguing to see the effect an age difference score has on the friendship pair's similarity.

Conclusions

One unique contribution of the study is that it used two ways of analyzing the data, correlations and analyses of variance. It was important to use both kinds of analysis because the majority of previous research, excluding Haselager, et al. (1998), has used correlations to compare similarity. This study uses both kinds of analyses, and the results varied somewhat depending on which kind of analysis was used. This finding was somewhat unexpected. Typically analyzing the variance of difference scores was a more stringent way of examining the data.

Another unique contribution of the current study was the sample size. There were a large number of friendship pairs, 454, to work with and to examine. The large sample size allowed for a clearer understanding of the teacher-rated and peer relations similarities between children and their friends.

The most interesting aspect of the study was that it examined friendship between children in different grades by examining ungraded primary classrooms. Most of the

previous research has focused on the friendship of children in the same grade. This study found that there were no differences in similarity between same-grade friends and different-grade friends. However, due to the limitation described previously and the operational definition of the construct of different age, it is unclear what the results would be if different-age friends were examined. Therefore, even though the examination of different-grade and same-grade friendships is uncommon and interesting, there is still more research that can be conducted in the area of same- and different-age friends.

The goal of the current study was to examine similarity between friends of the same-age and different-ages. Even with the limitation discussed above taken into consideration, the results indicate that children who are friends are more similar than randomly paired children. The results did not support the hypothesis that same-grade friends will be more similar than different-grade friends. However, the findings indicate that sharing similar characteristics, not grade or age, plays the most important role in determining friendship between children. Further research should be conducted on the area of comparing same-grade and different-age friendship pairs. The current study showed that different-grade friendships exist in a school-setting. However, the assumption was made that children in different grades differ in age by one year and that children in the same grade do not. Further research should be conducted on whether children of different ages are more similar or less similar than friends of the same age to fully examine this.

Implications for School Psychology

The current study shows that children do have both same-grade and different-grade friends. It is important for school psychologists to keep this finding in mind when

developing peer relationship skill-building interventions. School psychologists may want to have intervention groups set up with a slight scattering of grade ranges, only varying the grade by one year. This could help facilitate discussion and role-playing of the new skills that are being taught because older children might feel more comfortable teaching or showing younger children the skills.

The study also indicates that friends are more similar than randomly paired children. School psychologists should not choose children at random for skill building or intervention groups because the children may not interact well with one another and the group may be unproductive. When planning an intervention group, a school psychologist may want to think about including the children with severe deficits in a skill area as well as their friends. Because friends share a lot of similar characteristics, it is likely that a friend of a child with a severe skill deficit will also have a deficit in the same skill. Also friends tend to work well together, if inappropriate behavior is properly managed during the intervention group. Friends may be more likely to want to try out the role-playing activities and may be more willing to come out of their comfort zones if a friend is participating with them. If one child gains skills in a deficit area, then his/her friend is likely to begin to show gains as well, in order for the pair to remain friends.

The information provided in this study could also help school psychologists foresee the reckless behavior of a delinquent child's friend and intervene early before the friend's behavior gets out of control. School psychologists could be watching for signs of inappropriate behavior from friends of children with other issues as well, such as self-injurious behaviors, depression, aggressive acts, and drug and alcohol use. School

psychologists could even have teachers and peers watching out for inappropriate behaviors as well, because in this study peers and teachers rated friends similarly.

By examining the similarity between friends of the same grade and of different grades this study provides insight into the peer relationships of children within the educational setting. The study found that friends were generally more similar than randomly paired children and that same-grade and different grade friends did not differ in similarity for teacher-rated and peer relations variables. The data in the current study could help school psychologists plan interventions and prevent children from engaging in similar inappropriate behaviors as their friends.

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Appendix A

WESTERN KENTUCKY UNIVERSITY
Human Subjects Review Board
Office of Sponsored Programs
104 Foundation Building
502-745-4652; Fax 502-745-4211
E-mail: Phillip.Myers@Wku.Edu

In future correspondence please refer to HS9908, September 21, 1998

Dr. Elizabeth Lemerise
Department of Psychology
Western Kentucky University

Dear Dr. Lemerise:

1. Your research project "Effects of Emotion Cues on Social Information Processing," has undergone review by the Western Kentucky University IRB for human subjects of research and it has been determined that risks to subjects are: (1) minimized and reasonable; and that (2) research procedures are consistent with a sound research design and do not expose the subjects to unnecessary risk. Reviewers determined that: (1) benefits to subjects are considered along with the importance of the topic and that outcomes are reasonable; (2) selection of subjects is equitable; and (3) the purposes of the research and the research setting is amenable to subjects' welfare and producing desired outcomes; that indications of coercion or prejudice are absent, and that participation is clearly voluntary.

2. In addition, the IRB found that: (1)) informed consent will be sought and documented from each prospective subject. (2) provision is made for collecting, using and storing data in a manner that protects the safety and privacy of the subjects and the confidentiality of the data; and (3) that appropriate safeguards are included to protect the rights and welfare of the subjects. Please store all data securely at an on campus location for a minimum of three years after the end of the project.

3. Your research therefore meets the criteria of **Full Board Review** under the institutional human subjects protocol and is **approved**. Please note that the institution is not responsible for any actions regarding this protocol before approval. Copies of your request for human subjects review, your application, and this approval, are maintained in the Office Sponsored Programs at the above address. Please report any changes to this approved protocol to this office. A Continuing Review protocol will be sent to you in the future but no less than a year from now to determine the status of the project.

Kindest regards.

Sincerely,

Phillip E. Myers, Ph.D.
Director, Office of Sponsored Programs and
Human Subjects Coordinator

c: Human Subjects File

HSApprovalLemerise9908